WARNING
Do not use the stacker before reading and understanding these operating instructions.

NOTE!

Keep for future reference.

Operating Instructions / Parts List

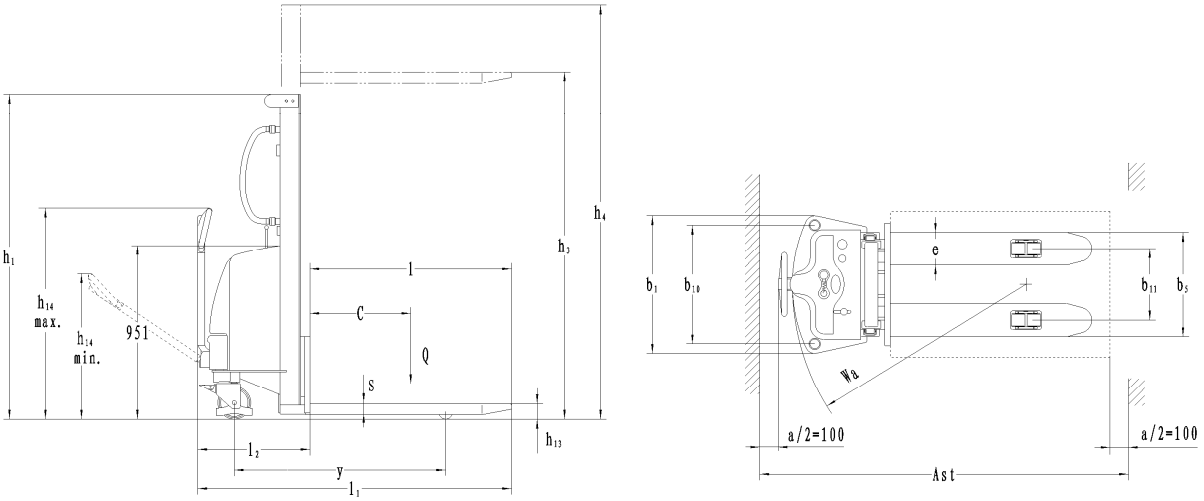
SPM10, SPN10

Welcome to use our electric stacker. Your stacker is made of high quality steel and SPED mast. It was designed to give a durable, reliable and easy to use product. For your safety and correct operation, please carefully read this instruction book and warnings on the stacker before using it.
These Operation Instructions of the stacker are edited for you to completely acquire and master the safety operations of the stacker.
Specifications of different types of stackers are described in this Operation Instruction book. During operation and maintenance, please apply the relevant parts for the type of the stacker.

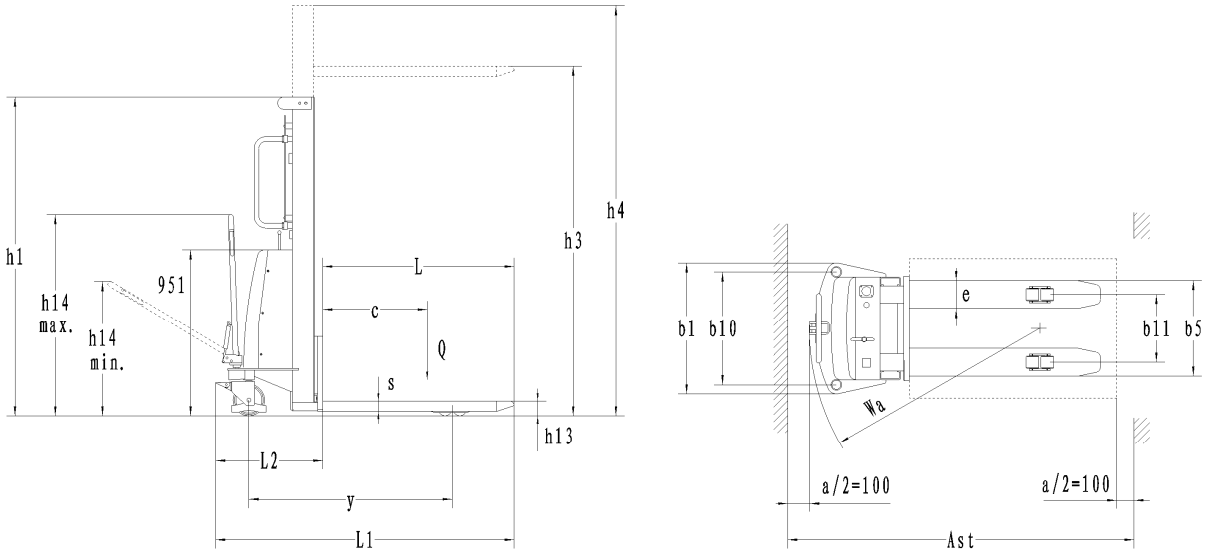
☞ **All the information reported herein is based on data available at the moment of printing. We reserve the right to modify our own products at any moment without notice and liability in any sanctions. Therefore, it is suggested to always verify possible updates and changes.**

1 Technical Specifications

1.1 Specification sheet for SPM10



1.2 Specification sheet for SPN10



SPM10 Technical Data

Characteristics	1.2	Model of manufacture	SPM1016	SPM1025	SPM1030
	1.3	Drive: (electric-battery or mains,diesel,petrol,fuel gas,manual)	manual	manual	manual
	1.4	Type of operation (hand,pedestrian,standing,seated,order picker)	pedestrian	pedestrian	pedestrian
	1.5	Load capacity / rated load Q (kg)	1000	1000	1000
	1.6	Load centre distance c (mm)	600	600	600
	1.9	Wheelbase y (mm)	1160	1160	1160
Weight	2.1	Weight (including battery) kg	410	475	495
Wheels Chassis	3.1	Types (solid rubber,superelastic,nylon, polyurethane)	Nylon/PU	Nylon/PU	Nylon/PU
	3.2	Type size,front mm	180x50	180x50	180x50
	3.3	Type size, rear mm	74x70	74x70	74x70
	3.5	Wheels,number front/rear	2/4	2/4	2/4
	3.6	Track width, front b_{10} (mm)	658	658	658
	3.7	Track width, rear b_{11} (mm)	390/490	390/490	390/490
Basic Dimensions	4.2	Lowered mast height h_1 (mm)	1980	1830	2080
	4.4	Lift height h_3 (mm)	1600	2500	3000
	4.5	Extended mast height h_4 (mm)	1980	3070	3570
	4.9	Height of handle min./max. h_{14} (mm)	790/1156	790/1156	790/1156
	4.15	Fork height lowered h_{13} (mm)	85	85	85
	4.19	Overall length L_1 (mm)	1720/1570	1720/1580	1720/1580
	4.20	Length to face of forks L_2 (mm)	610/670	610/670	610/670
	4.21	Overall width b_1 (mm)	762	762	762
	4.22	Fork dimensions s/e/L (mm)	60/180/1100 60/150/900	60/180/1100 60/150/900	60/180/1100 60/150/900
	4.25	Width over forks b_5 (mm)	570 330~640	570 330~640	570 330~640
	4.33	Aisle width for pallets 1000×1200 crossways Ast (mm)	2145	2145	2145
	4.34	Aisle width for pallets 800×1200 lengthways Ast (mm)	2175	2175	2175
	4.35	Turning radius Wa (mm)	1280	1280	1280
Performance	5.2	Lift speed ,laden/unladen mm/s	90/140	90/140	90/140
	5.3	Lowering speed ,laden/unladen mm/s	120/100	120/100	120/100
	5.11	Parking brake	manual	manual	manual
E-Motor	6.2	Lift motor rating at S_3 15% kw	1.5	1.5	1.5
	6.4	Battery voltage ,nominal capacity K_5 V/Ah	12/150	12/150	12/150
	6.5	Battery weight kg	45	45	45

SPN10 Technical Data

Characteristics	1.2	Model of manufacture	SPN1016	SPN1025	SPN1030
	1.3	Drive: (electric-battery or mains,diesel,petrol,fuel gas,manual)	manual	manual	manual
	1.4	Type of operation (hand,pedestrian,standing,seated,order picker)	pedestrian	pedestrian	pedestrian
	1.5	Load capacity / rated load Q (kg)	1000	1000	1000
	1.6	Load centre distance c (mm)	600	600	600
	1.9	Wheelbase y (mm)	1180	1180	1180
Weight	2.1	Weight (including battery) kg	396	443	466
Wheels Chassis	3.1	Types (solid rubber,superelastic,nylon, polyurethane)	Nylon/PU	Nylon/PU	Nylon/PU
	3.2	Type size,front mm	180x50	180x50	180x50
	3.3	Type size, rear mm	74x70	74x70	74x70
	3.5	Wheels,number front/rear	2/4	2/4	2/4
	3.6	Track width, front b_{10} (mm)	658	658	658
	3.7	Track width, rear b_{11} (mm)	390/490	390/490	390/490
Basic Dimensions	4.2	Lowered mast height h_1 (mm)	1980	1830	2080
	4.4	Lift height h_3 (mm)	1600	2500	3000
	4.5	Extended mast height h_4 (mm)	1980	3070	3570
	4.9	Height of handle min./max. h_{14} (mm)	770/1153	770/1153	770/1153
	4.15	Fork height lowered h_{13} (mm)	85	85	85
	4.19	Overall length L_1 (mm)	1720/1570	1720/1580	1720/1580
	4.20	Length to face of forks L_2 (mm)	610/670	610/670	610/670
	4.21	Overall width b_1 (mm)	762	762	762
	4.22	Fork dimensions s/e/L (mm)	60/160/1100 60/150/900	60/160/1100 60/150/900	60/160/1100 60/150/900
	4.25	Width over forks b_5 (mm)	550 330~640	550 330~640	550 330~640
	4.33	Aisle width for pallets 1000×1200 crossways Ast (mm)	2145	2145	2145
	4.34	Aisle width for pallets 800×1200 lengthways Ast (mm)	2175	2175	2175
	4.35	Turning radius Wa (mm)	1280	1280	1280
Performance	5.2	Lift speed ,laden/unladen mm/s	90/140	90/140	90/140
	5.3	Lowering speed ,laden/unladen mm/s	120/100	120/100	120/100
	5.11	Parking brake	manual	manual	manual
E-Motor	6.2	Lift motor rating at S_3 15% kw	1.5	1.5	1.5
	6.4	Battery voltage ,nominal capacity K_5 V/Ah	12/150	12/150	12/150
	6.5	Battery weight kg	45	45	45

1.3 Residual Capacity at Different Lifting Height

Up to h3 mm	ACTUAL CAPACITY (Q) kg		
1500	1000	500	
2500	1000	400	
3000	600	300	
Load centre distance (C) mm	600	800	

2 Safety Guidance

2.1 The operator should read all warning signs and instructions here on the stacker before using it.
2.2 The operator should not operate a stacker unless s/he are familiar with it and have been trained or authorized to do so.
2.3 S/he should not operate a stacker unless s/he has checked its condition. S/he should pay special attention to the chain, the wheels, the handle, the guide frame, the pilot wheel, the mast, battery, etc.
2.4 S/he should not use the stacker on a slopping ground or on a barbaric or explosive danger environment.
2.5 S/he should not take up or carry any people on the forks.
2.6 When forks lifting, the operator should forbid anyone to stand under the forks or pass through the forks.
2.7 S/he had better take on and wear gloves for labor protecting.
2.8 S/he not move the stacker when the goods are lifted to the height more than 300mm.
2.9 While the goods have been carried, transported or lifted, all people should be away from the forks for 600mm.
2.10 The weight of goods should be evenly distributed on the two forks, do not use only one fork. The center of gravity of goods should be in the center of both two forks.
2.11 The stacker should not be loaded over its maximum capacity.
2.12 Before using or charging it, the operator should check the cell liquid, if not enough, full it with distilled water.
2.13 Charging should be in dry and ventilated location, and far away from any source of fire.
2.14 Keep the forks in the lowest position possible when the stacker is not in use.
2.15 At other special condition or places, the operator should be careful when operating the stacker.

3 Maintenance

3.1 Hydraulic oil

Please check the oil level every six months. The oil should be hydraulic oil: **ISO VG32**, its viscosity should be 32cSt at 40^{o}C, total volume is about 4.0lt. Use at the temperature between -20^{o}C~50 ^{o}C and replace the hydraulic oil (every 12 months).

3.2 Daily check and maintenance

It is necessary to check the stacker daily. Special attention should be paid to the wheels, the axles, the

thread and the rags, etc., it may block the wheels, the forks and the mast, the chain, the battery should be checked, too. The forks should be unloaded and lowered in the lowest position when the job is over.

3.3 Lubrication

The operator should use motor oil or grease to lubricate all movable parts.

3.4 Maintenance of battery:

Keep all the screw caps on each cell battery dry and clean. Each connecting terminal and cable terminal should be tightened and painted with clean grease. The exposed connecting terminal and connecting rod of battery should be covered with anti-slip insulated cover.

3.5 Recharging the battery fully and carrying out usual battery maintenance.

Maintain charging the battery every third month and check the fluid level.

4 How to Charge Storage Battery

4.1 Charge storage battery when its voltage is less than 10 Volt.

4.2 Please check the battery liquid before charging, if it is not enough, add some distilled water.

4.3 The charging environment should be ventilated and far away from any possible source of fire.

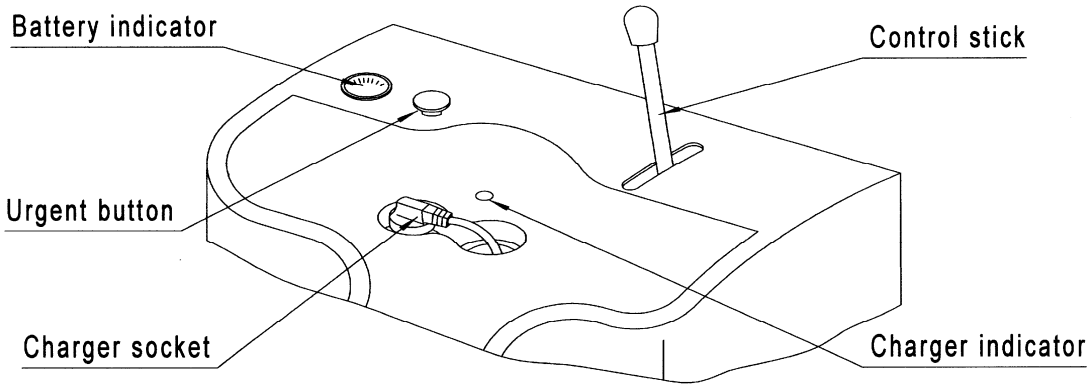
4.4 If the stacker was not in use for a long time, it should be charged for not less than two hours every week.

4.5 The voltage on the indicator should not be over 15 Volt when charging.

4.6 Do not use the stacker during charging.

5 Control Panel

SPM10



SPN10

5.1 Urgent button

When the operator presses down this switch, it will switch off the power, and then s/he turns it clockwise to switch on the power.

5.2 Battery indicator

It indicates the voltage of battery. When its voltage is less than 10 Volt, the operator should not use this stacker before charging it.

5.3 Control stick

This stick controls the forks to move down and up to lower and lift.

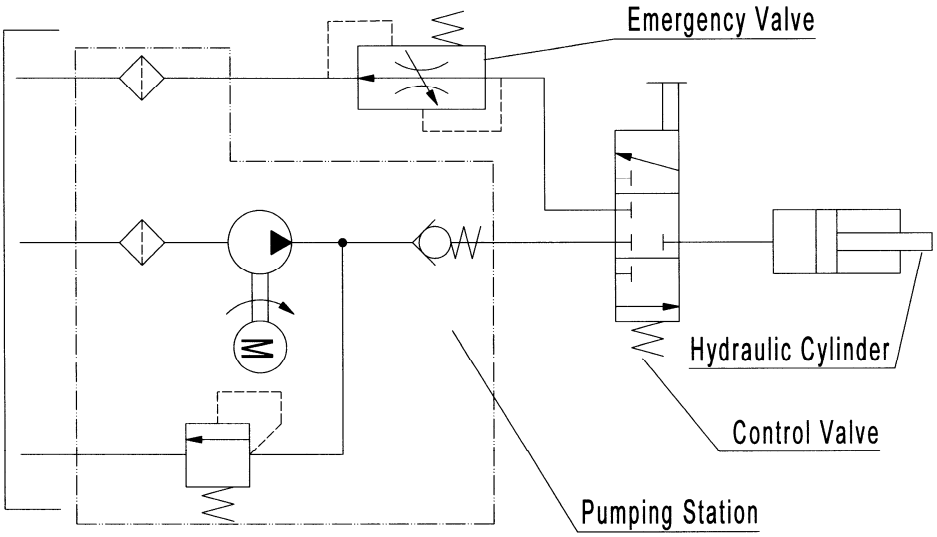
5.4 Charger socket

6 Trouble Shooting

No	Trouble	Clause	Fixing Methods
1	The forks can not be lifted to the maximum height	● The hydraulic oil is not enough	● Pour in the oil
2	The forks can not be lifted (Motor is rotary)	● Without hydraulic oil ● The oil has impurities	● Fill in the oil ● Change the oil
3	The motor cannot run.	● The urgent switch is pressed down, cut off the power ● The voltage is too low ● The connectors of electrical wire is loose ● The contactor of DC motor is broken	● Turn it clockwise, switch on the power ● Charge it ● Turn it firm ● Replace with a new one
4	The forks cannot be descended.	● The piston rod or mast is deformed resulting from partial loading slanting to one side or over-loading ● The forks were kept in the high position for long time with piston rod bared to arise in rusting and jamming of the rod ● The release valve of pump is not opened	● Replace with a new one ● Keep the forks in the lowest position if not in use and pay more attention to lubricate the rod ● Check it, if damaged, replace with a new one
5	Leaks	● Sealing parts worn or damaged ● Some part cracked or worn into small	● Replace with new ones ● Replace with new ones
6	The forks descend without the release valve worked.	● The impurities in the oil causes the release valve to be unable to close tight ● Sealing parts worn or damaged ● The release valve is damaged	● Change the oil ● Replace with new ones ● Replace with a new one
7	The battery cannot be charged	● Battery is broken ● The charging plug is loose	● Replace with a new one ● Turn it firm

△!DO NOT ATTEMP TO REPAIR THE STACKER UNLESS YOU ARE TRAINED AND AUTHORIZED TO DO SO.

6 Hydraulic Flow Diagram

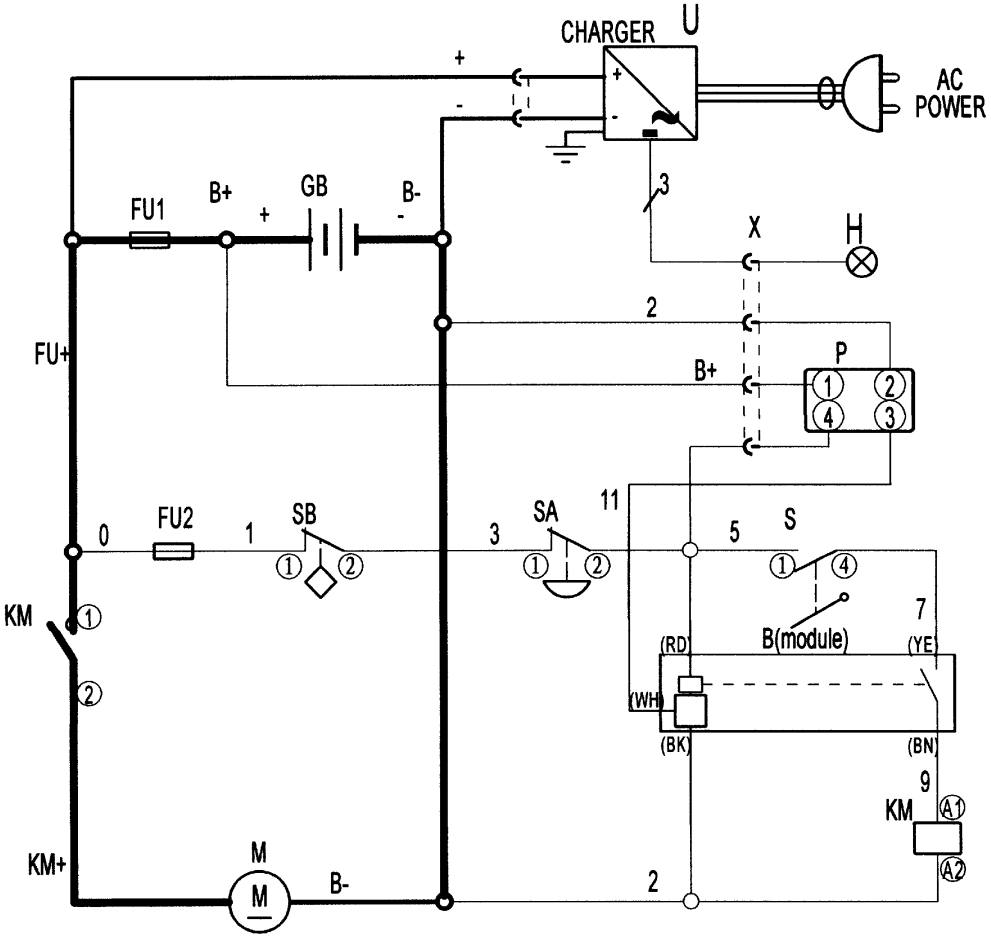


Woring pressure P=122Bar

7 Electric Wires Diagram

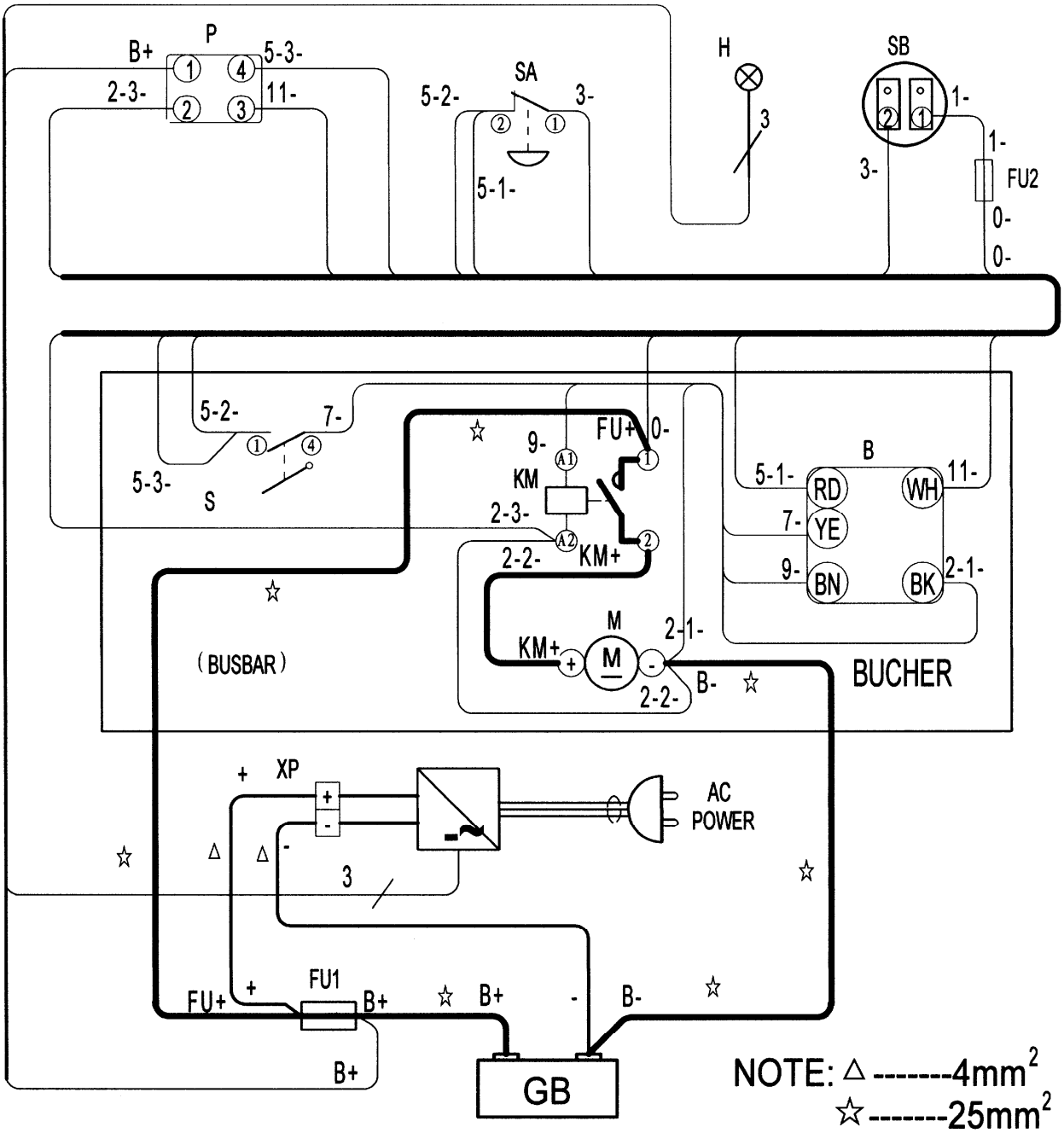
8.1 Circuit Diagram

SPM10



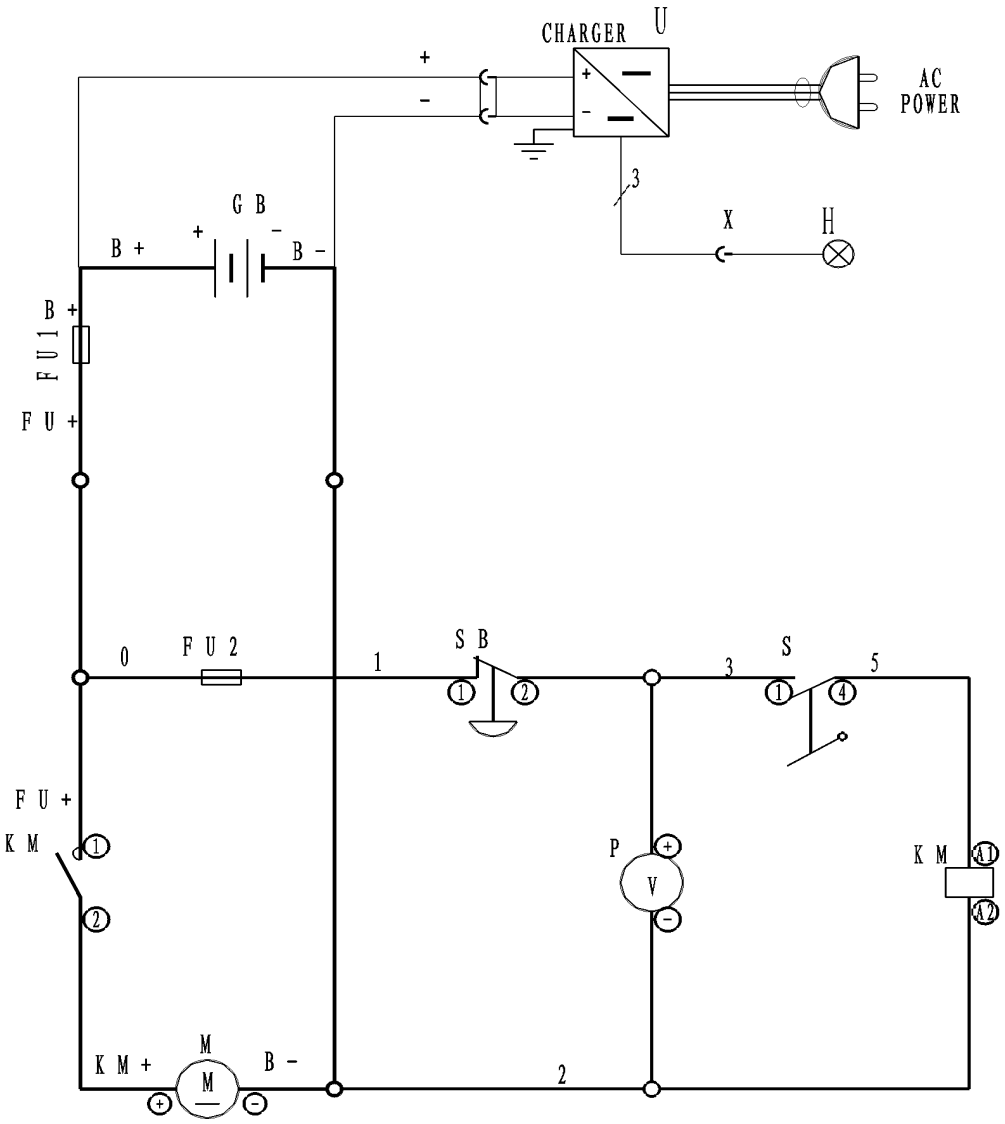
8.2 Connection Diagram

SPM10



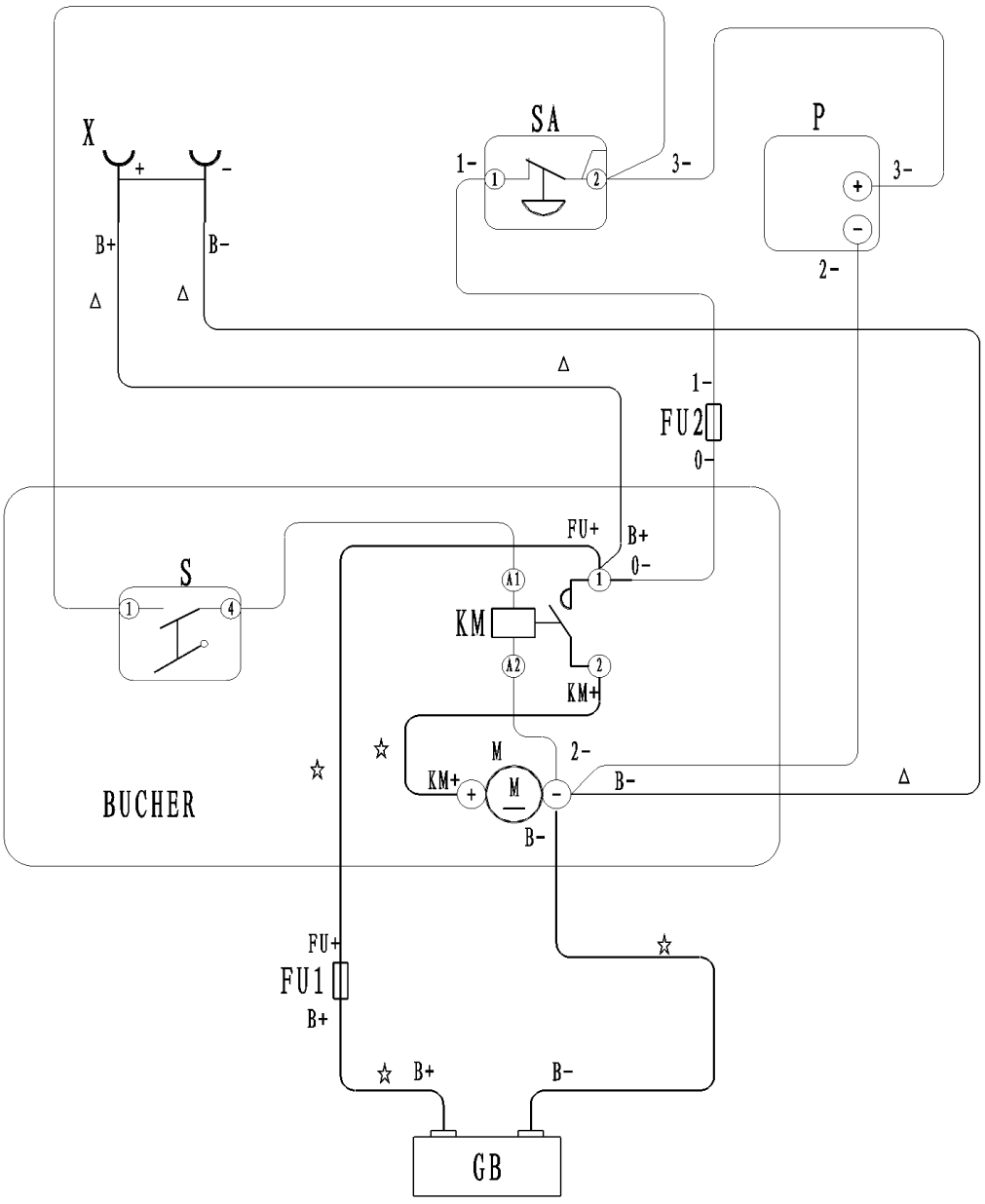
8.3 Circuit Diagram

SPN10



8.4 Connection Diagram

SPN10

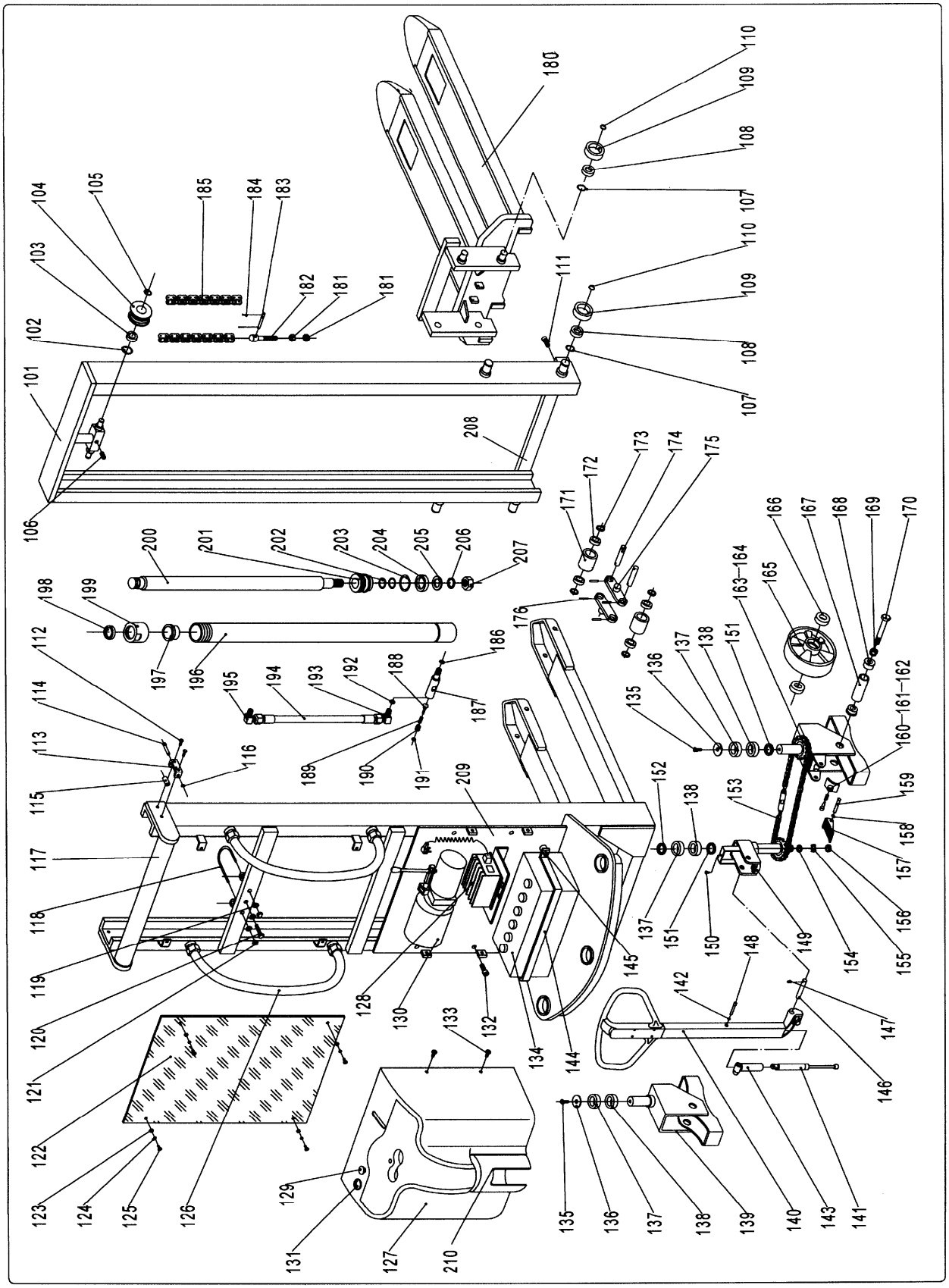


NOTE: Δ-------4mm ^{2}

☆-------25mm ^{2}

8 Parts List

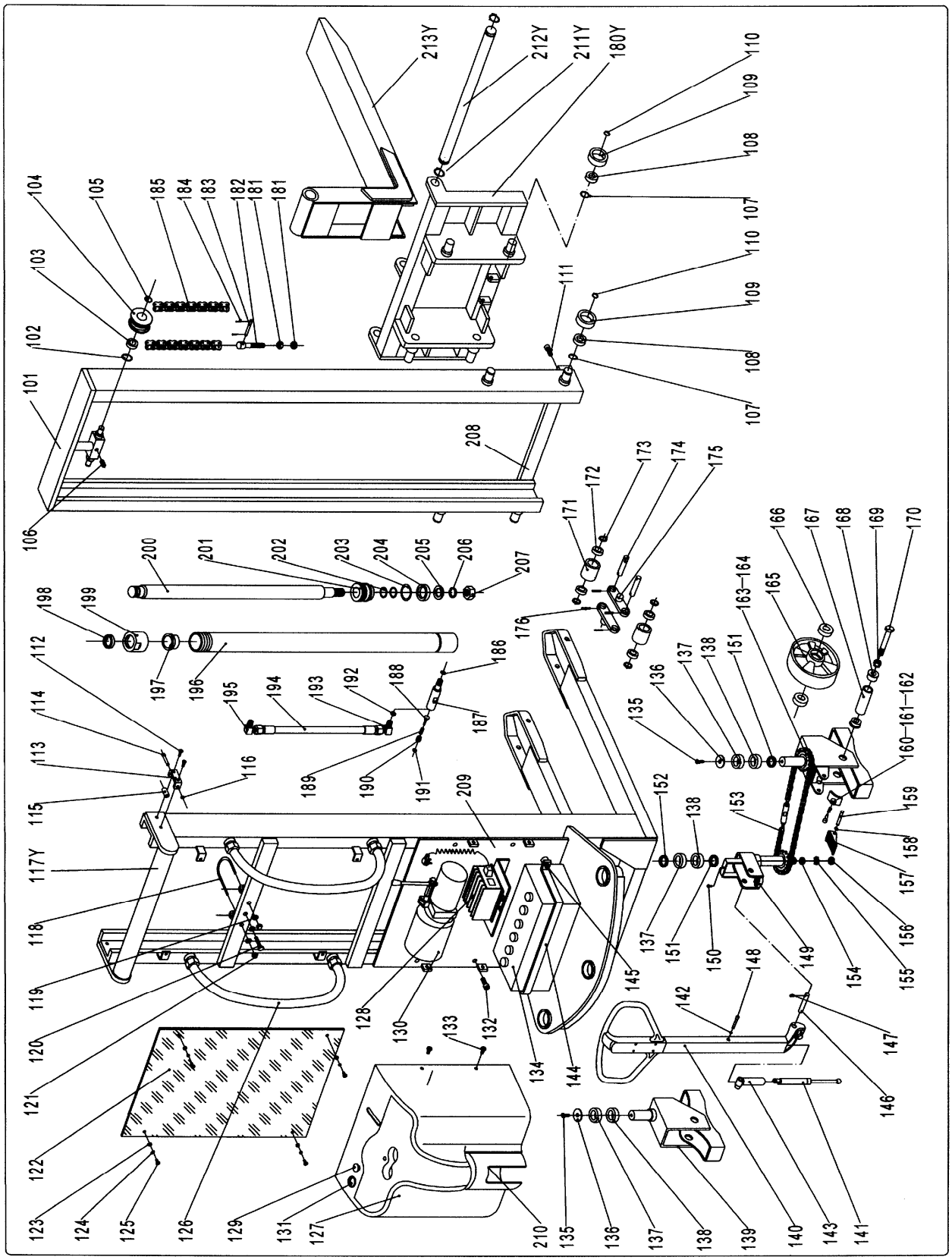
9.1 SPM1025G and SPM1030G part list



SPM1025G and SPM1030G part list

No.	Description	Qty.	No.	Description	Qty.
101	Inner Mast	1	155	Washer	1
102	Locking Ring	2	156	Nut	1
103	Bearing	2	157	Foot Plate	1
104	Roller For Chain	2	158	Locking Ring	1
105	Locking Ring	2	159	Shaft	1
106	Screw	1	160	Brake	1
107	Locking Ring	8	161	Spring	1
108	Bearing	8	162	Bolt	1
109	Roller	8	163	Sprocket Wheel	2
110	Locking Ring	8	164	Seat of Turning Wheel	1
111	Bolt	2	165	Big Wheel	2
112	Bolt	4	166	Bearing	4
113	Crutch of Idler Pulley	2	167	Shaft of Wheel	2
114	Shaft	2	168	Washer	4
115	Idler Pulley	2	169	Locking Nut	2
116	Locking Ring	2	170	Bolt	2
117	Mast	1	171	Loading Roller	4
118	Hoop	1	172	Bearing	8
119	Nut	3	173	Washer	8
120	Bolt	1	174	Shaft	4
121	Nut	2	175	Linking Plate	4
122	Protecting Meshwork	1	176	Elastic Pin	8
123	Protecting Washer	4	180	Fork Carriage	1
124	Washer	4	181	Nut	4
125	Bolt	4	182	Bolt	2
126	Handle	2	183	Pin	4
127	Cover	1	184	Cotter pin	8
128	Charger	1	185	Chain	2
129	Urgent Switch	1	186	O-Ring	1
130	Pump Station	1	187	Body of Adjusting Valve	1
131	Voltage Meter	1	188	Adjusting Bolt	1
132	Bolt	4	189	Spring	1
133	Bolt	4	190	Spindle of Valve	1
134	Battery	1	191	Nut	1
135	Bolt	2	192	Seal Washer	1
136	Cap	2	193	Elbow Bend	1
137	Bearing	3	194	Vitta	1
138	Bearing	3	195	Elbow Bend	1
139	Seat of Wheel	1	196	Earthen Pipe	1
140	Draw-Bar for Turning	1	197	Sleeve	1
141	Gas spring	1	198	Dust Ring	1
142	Locking Ring	1	199	Cover	1
143	Seat of gas spring	1	200	Piston Rod	1
144	Hoop	1	201	Piston	1
145	Bolt	2	202	O-Ring	2
146	Shaft	1	203	O-Ring	1
147	Bolt	1	204	Seal	1
148	Shaft	1	205	Washer	1
149	Seat of Draw-Bar	1	206	Elastic Washer	1
150	Bolt	1	207	Nut	1
151	Washer	2	208	Connect shank	1
152	Washer	1	209	Fixed Plank	1
153	Chain	1	210	Round cover	1
154	Washer	1			

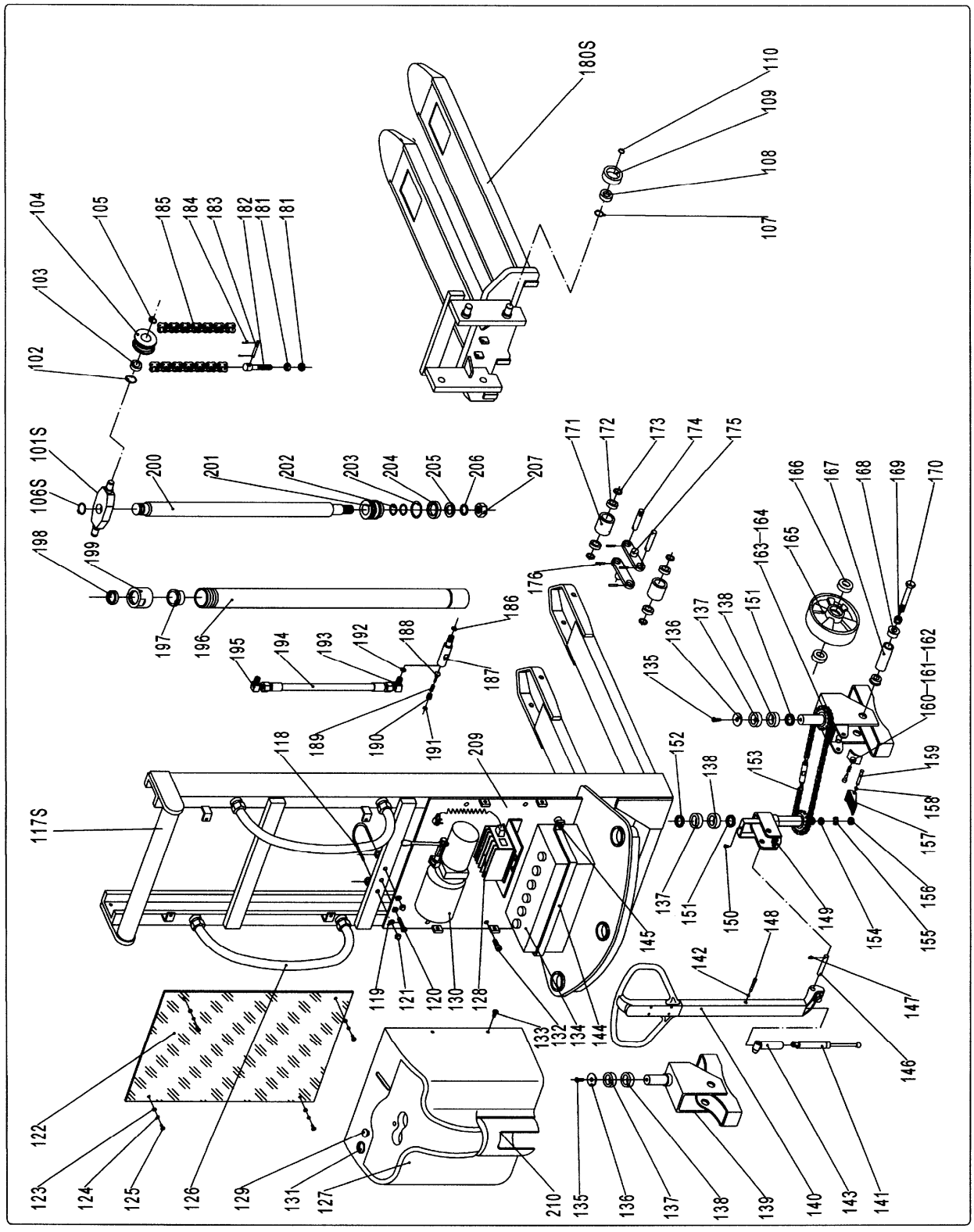
9.2 SPM1025 and SPM1030 parts list



SPM1025 and SPM1030 part list

No.	Description	Qty.	No.	Description	Qty.
101	Inner Mast	1	156	Nut	1
102	Locking Ring	2	157	Foot Plate	1
103	Bearing	2	158	Locking Ring	1
104	Roller For Chain	2	159	Shaft	1
105	Locking Ring	2	160	Brake	1
106	Screw	1	161	Spring	1
107	Locking Ring	8	162	Bolt	1
108	Bearing	8	163	Sprocket Wheel	2
109	Roller	8	164	Seat of Turning Wheel	1
110	Locking Ring	8	165	Big Wheel	2
111	Bolt	2	166	Bearing	4
112	Bolt	4	167	Shaft of Wheel	2
113	Crutch of Idler Pulley	2	168	Washer	4
114	Shaft	2	169	Locking Nut	2
115	Idler Pulley	2	170	Bolt	2
116	Locking Ring	2	171	Loading Roller	4
117Y	Mast	1	172	Bearing	8
118	Hoop	1	173	Washer	8
119	Nut	3	174	Shaft	4
120	Bolt	1	175	Linking Plate	4
121	Nut	2	176	Elastic Pin	8
122	Protecting Meshwork	1	180Y	Fork Carriage	1
123	Protecting Washer	4	181	Nut	4
124	Washer	4	182	Bolt	2
125	Bolt	4	183	Pin	4
126	Handle	2	184	Cotter pin	8
127	Cover	1	185	Chain	2
128	Charger	1	186	O-Ring	1
129	Urgent Switch	1	187	Body of Adjusting Valve	1
130	Pump Station	1	188	Adjusting Bolt	1
131	Voltage Meter	1	189	Spring	1
132	Bolt	4	190	Spindle of Valve	1
133	Bolt	4	191	Nut	1
134	Battery	1	192	Seal Washer	1
135	Bolt	2	193	Elbow Bend	1
136	Cap	2	194	Vitta	1
137	Bearing	3	195	Elbow Bend	1
138	Bearing	3	196	Earthen Pipe	1
139	Seat of Wheel	1	197	Sleeve	1
140	Draw-Bar for Turning	1	198	Dust Ring	1
141	Gas spring	1	199	Cover	1
142	Locking Ring	1	200	Piston Rod	1
143	Seat of gas spring	1	201	Piston	1
144	Hoop	1	202	O-Ring	2
145	Bolt	2	203	O-Ring	1
146	Shaft	1	204	Seal	1
147	Bolt	1	205	Washer	1
148	Shaft	1	206	Elastic Washer	1
149	Seat of Draw-Bar	1	207	Nut	1
150	Bolt	1	208	Connect shank	1
151	Washer	2	209	Fixed Plank	1
152	Washer	1	210	Round cover	1
153	Chain	1	211Y	Retaining ring	2
154	Washer	1	212Y	Long shaft	1
155	Washer	1	213Y	Fork	2

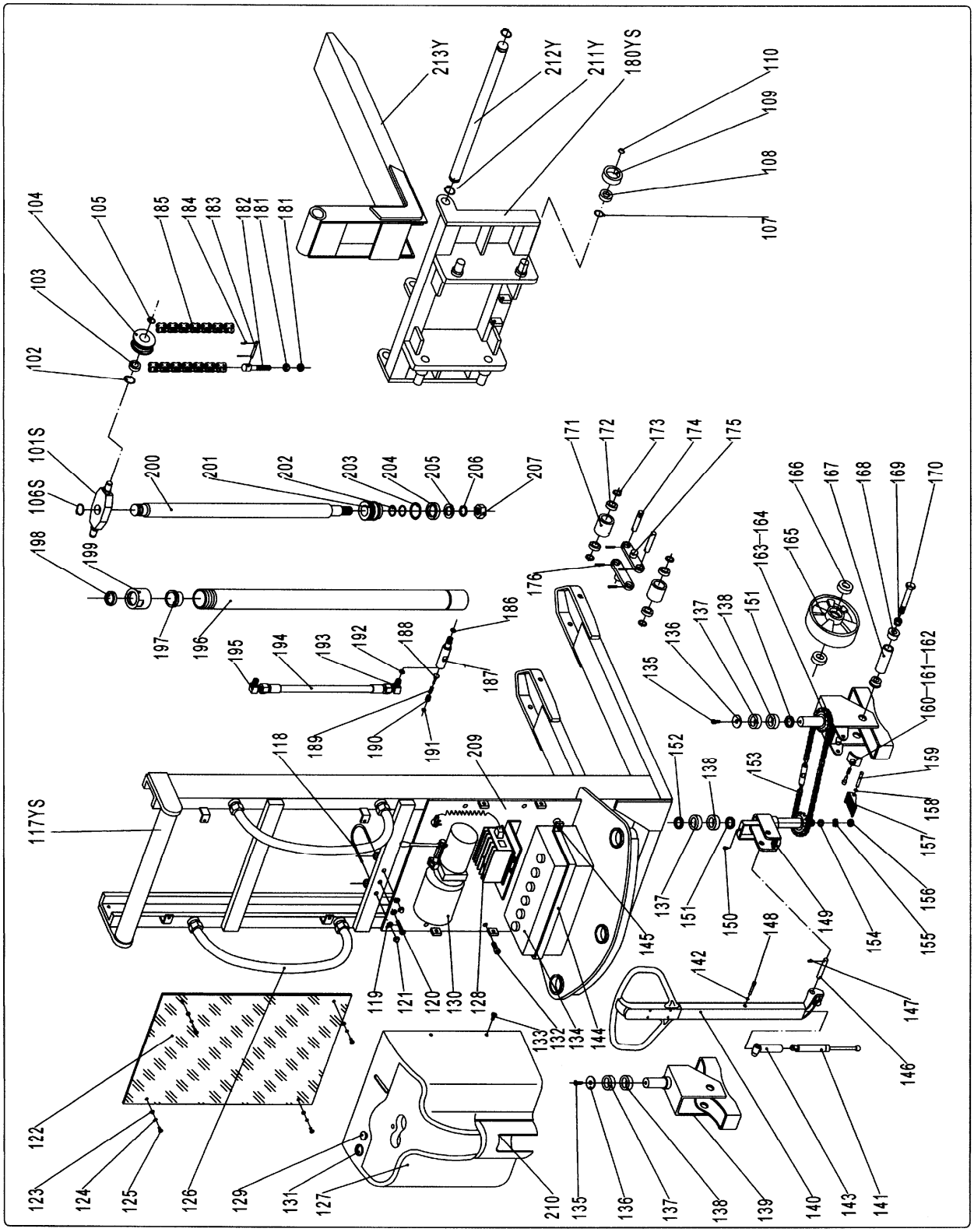
9.3 SPM1016G part list



SPM1016G part list

No.	Description	Qty.	No.	Description	Qty.
101S	Holding plate	1	156	Nut	1
102	Locking Ring	2	157	Foot Plate	1
103	Bearing	2	158	Locking Ring	1
104	Roller For Chain	2	159	Shaft	1
105	Locking Ring	2	160	Brake	1
106S	Retaining ring	1	161	Spring	1
107	Locking Ring	4	162	Bolt	1
108	Bearing	4	163	Sprocket Wheel	2
109	Roller	4	164	Seat of Turning Wheel	1
110	Locking Ring	4	165	Big Wheel	2
111			166	Bearing	4
112			167	Shaft of Wheel	2
113			168	Washer	4
114			169	Locking Nut	2
115			170	Bolt	2
116			171	Loading Roller	4
117S	Mast	1	172	Bearing	8
118	Hoop	1	173	Washer	8
119	Nut	3	174	Shaft	4
120	Bolt	1	175	Linking Plate	4
121	Nut	2	176	Elastic Pin	8
122	Protecting Meshwork	1	180S	Fork Carriage	1
123	Protecting Washer	4	181	Nut	4
124	Washer	4	182	Bolt	2
125	Bolt	4	183	Pin	4
126	Handle	2	184	Cotter pin	8
127	Cover	1	185	Chain	2
128	Charger	1	186	O-Ring	1
129	Urgent Switch	1	187	Body of Adjusting Valve	1
130	Pump Station	1	188	Adjusting Bolt	1
131	Voltage Meter	1	189	Spring	1
132	Bolt	4	190	Spindle of Valve	1
133	Bolt	4	191	Nut	1
134	Battery	1	192	Seal Washer	1
135	Bolt	2	193	Elbow Bend	1
136	Cap	2	194	Vitta	1
137	Bearing	3	195	Elbow Bend	1
138	Bearing	3	196	Earthen Pipe	1
139	Seat of Wheel	1	197	Sleeve	1
140	Draw-Bar for Turning	1	198	Dust Ring	1
141	Gas spring	1	199	Cover	1
142	Locking Ring	1	200	Piston Rod	1
143	Seat of gas spring	1	201	Piston	1
144	Hoop	1	202	O-Ring	2
145	Bolt	2	203	O-Ring	1
146	Shaft	1	204	Seal	1
147	Bolt	1	205	Washer	1
148	Shaft	1	206	Elastic Washer	1
149	Seat of Draw-Bar	1	207	Nut	1
150	Bolt	1	208		
151	Washer	2	209	Fixed Plank	1
152	Washer	1	210	Round cover	1
153	Chain	1			
154	Washer	1			
155	Washer	1			

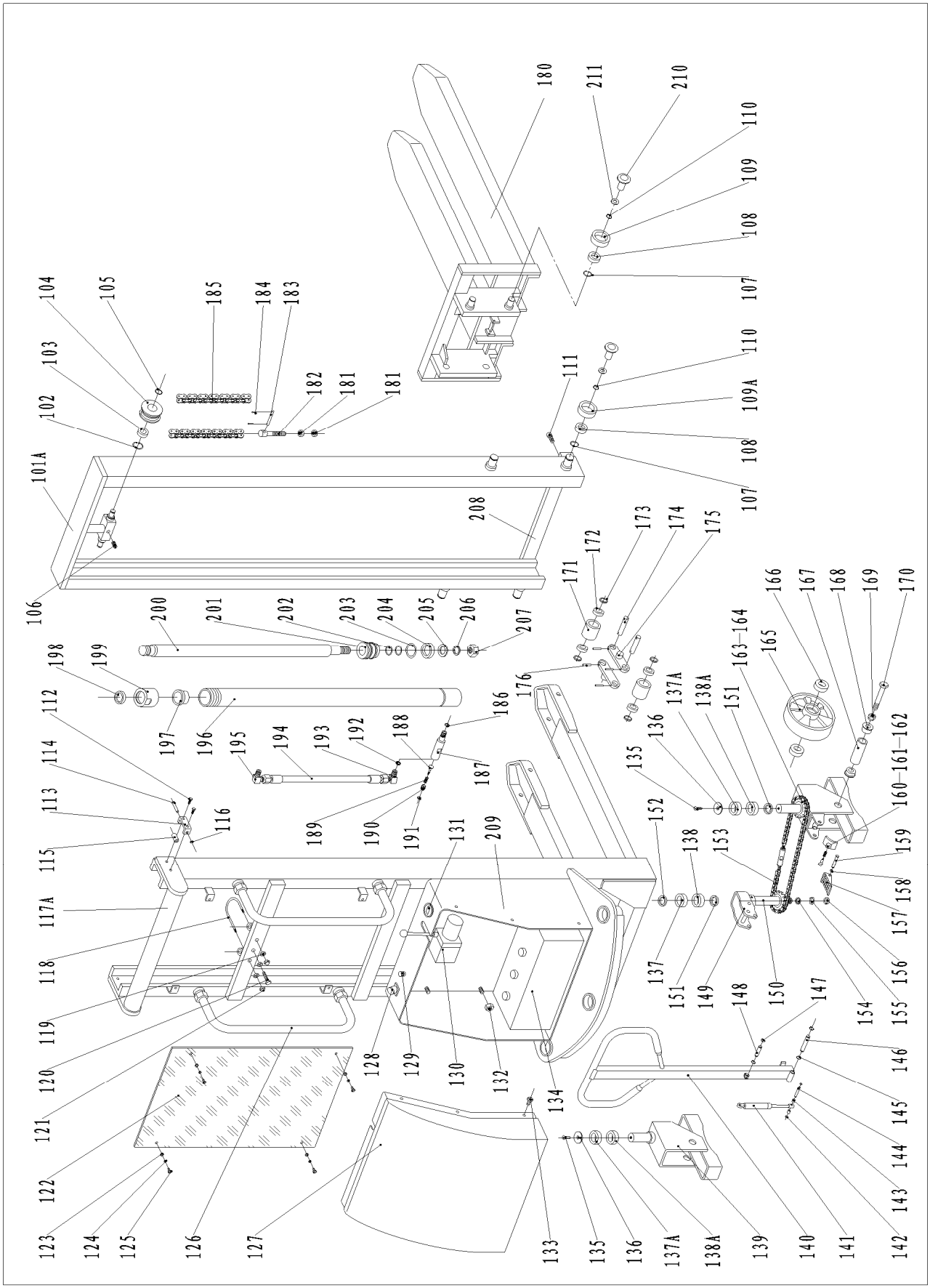
9.4 SPM1016 part list



SPM1016 part list

No.	Description	Qty.	No.	Description	Qty.
101S	Holding plate	1	156	Nut	1
102	Locking Ring	2	157	Foot Plate	1
103	Bearing	2	158	Locking Ring	1
104	Roller For Chain	2	159	Shaft	1
105	Locking Ring	2	160	Brake	1
106S	Retaining ring	1	161	Spring	1
107	Locking Ring	4	162	Bolt	1
108	Bearing	4	163	Sprocket Wheel	2
109	Roller	4	164	Seat of Turning Wheel	1
110	Locking Ring	4	165	Big Wheel	2
111			166	Bearing	4
112			167	Shaft of Wheel	2
113			168	Washer	4
114			169	Locking Nut	2
115			170	Bolt	2
116			171	Loading Roller	4
117YS	Mast	1	172	Bearing	8
118	Hoop	1	173	Washer	8
119	Nut	3	174	Shaft	4
120	Bolt	1	175	Linking Plate	4
121	Nut	2	176	Elastic Pin	8
122	Protecting Meshwork	1	180YS	Fork Carriage	1
123	Protecting Washer	4	181	Nut	4
124	Washer	4	182	Bolt	2
125	Bolt	4	183	Pin	4
126	Handle	2	184	Cotter pin	8
127	Cover	1	185	Chain	2
128	Charger	1	186	O-Ring	1
129	Urgent Switch	1	187	Body of Adjusting Valve	1
130	Pump Station	1	188	Adjusting Bolt	1
131	Voltage Meter	1	189	Spring	1
132	Bolt	4	190	Spindle of Valve	1
133	Bolt	4	191	Nut	1
134	Battery	1	192	Seal Washer	1
135	Bolt	2	193	Elbow Bend	1
136	Cap	2	194	Vitta	1
137	Bearing	3	195	Elbow Bend	1
138	Bearing	3	196	Earthen Pipe	1
139	Seat of Wheel	1	197	Sleeve	1
140	Draw-Bar for Turning	1	198	Dust Ring	1
141	Gas spring	1	199	Cover	1
142	Locking Ring	1	200	Piston Rod	1
143	Seat of gas spring	1	201	Piston	1
144	Hoop	1	202	O-Ring	2
145	Bolt	2	203	O-Ring	1
146	Shaft	1	204	Seal	1
147	Bolt	1	205	Washer	1
148	Shaft	1	206	Elastic Washer	1
149	Seat of Draw-Bar	1	207	Nut	1
150	Bolt	1	208		
151	Washer	2	209	Fixed Plank	1
152	Washer	1	210	Round cover	1
153	Chain	1	211Y	Retaining ring	2
154	Washer	1	212Y	Long shaft	1
155	Washer	1	213Y	Fork	2

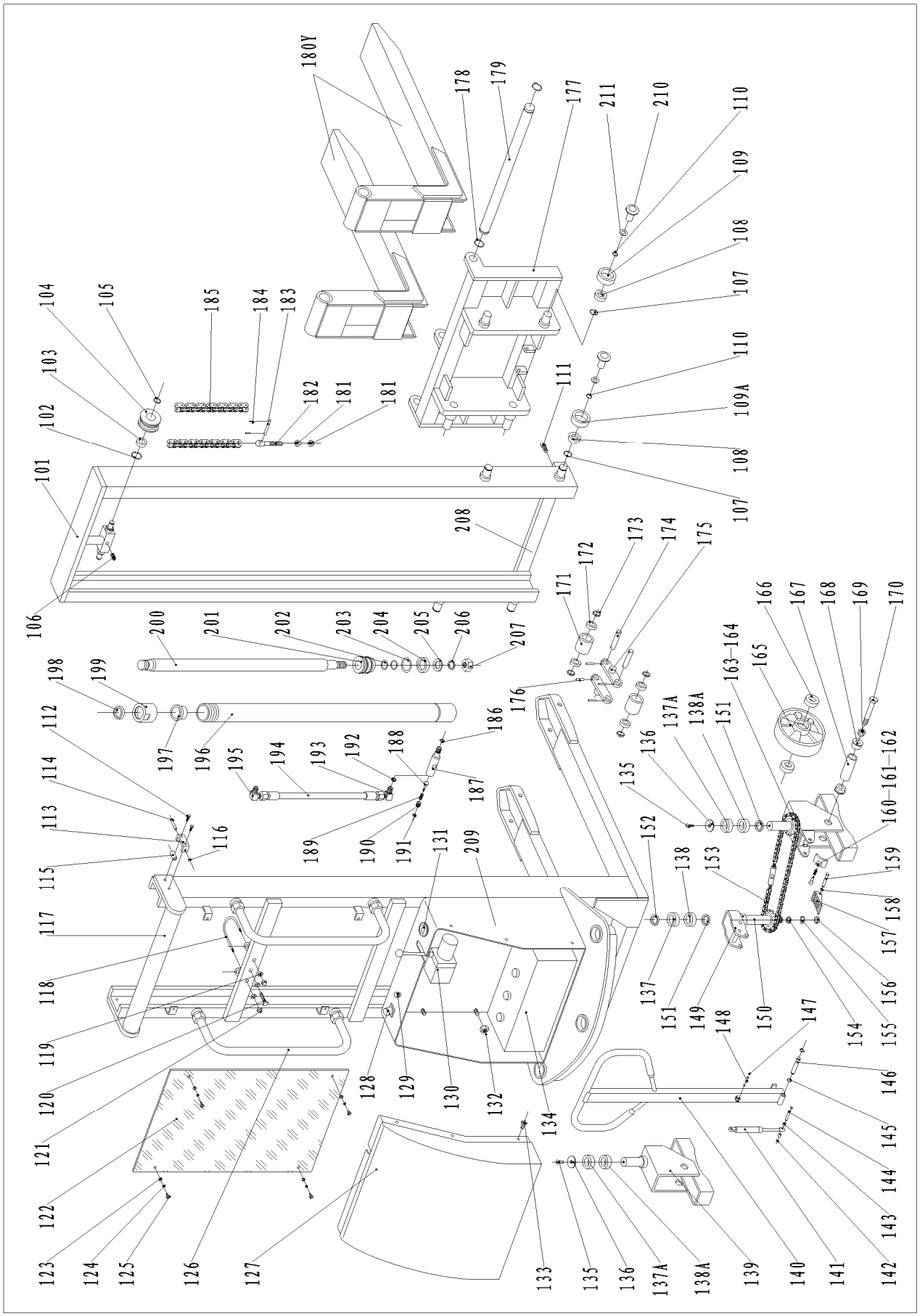
9.5 SPN1025G and SPN1030G part list



SPN1025G and SPN1030G part list

No.	Description	Qty.	No.	Description	Qty.
101A	Inner Mast	1	154	Washer	1
102	Locking Ring	2	155	Washer	1
103	Bearing	2	156	Nut	1
104	Roller For Chain	2	157	Foot Plate	1
105	Locking Ring	2	158	Locking Ring	1
106	Screw	1	159	Shaft	1
107	Locking Ring	8	160	Brake	1
108	Bearing	8	161	Spring	1
109	Roller	4	162	Bolt	1
109A	Roller	4	163	Sprocket Wheel	2
110	Locking Ring	8	164	Seat of Turning Wheel	1
111	Bolt	2	165	Big Wheel	2
112	Bolt	4	166	Bearing	4
113	Crutch of Idler Pulley	2	167	Shaft of Wheel	2
114	Shaft	2	168	Washer	4
115	Idler Pulley	2	169	Locking Nut	2
116	Locking Ring	2	170	Bolt	2
117A	Mast	1	171	Loading Roller	4
118	Hoop	1	172	Bearing	8
119	Nut	3	173	Washer	8
120	Bolt	1	174	Shaft	4
121	Nut	2	175	Linking Plate	4
122	Protecting Meshwork	1	176	Elastic Pin	8
123	Protecting Washer	4	180	Fork Carriage	1
124	Washer	4	181	Nut	4
125	Bolt	4	182	Bolt	2
126	Handle	2	183	Pin	4
127	Cover	1	184	Cotter pin	8
128	Charging Plug	1	185	Chain	2
129	Urgent Switch	1	186	O-Ring	1
130	Pump Station	1	187	Body of Adjusting Valve	1
131	Voltage Meter	1	188	Adjusting Bolt	1
132	Nut	4	189	Spring	1
133	Bolt	6	190	Spindle of Valve	1
134	Battery	1	191	Nut	1
135	Bolt	2	192	Seal Washer	1
136	Cap	2	193	Elbow Bend	1
137	Bearing	1	194	Vitta	1
137A	Bearing	2	195	Elbow Bend	1
138	Bearing	1	196	Earthen Pipe	1
138A	Bearing	2	197	Sleeve	1
139	Seat of Wheel	1	198	Dust Ring	1
140	Draw-Bar for Turning	1	199	Cover	1
141	Gas spring	1	200	Piston Rod	1
142	Locking Ring	2	201	Piston	1
143	Washer	2	202	O-Ring	2
144	Shaft	1	203	O-Ring	1
145	Locking Ring	2	204	Seal	1
146	Shaft	1	205	Washer	1
147	Locking Ring	2	206	Elastic Washer	1
148	Shaft	1	207	Nut	1
149	Seat of Draw-Bar	1	208	Connect shank	1
150	Turning Shaft	1	209	Fixed Box	1
151	Washer	2	210	Side mat	8
152	Washer	1	211	Washer	8
153	Chain	1			

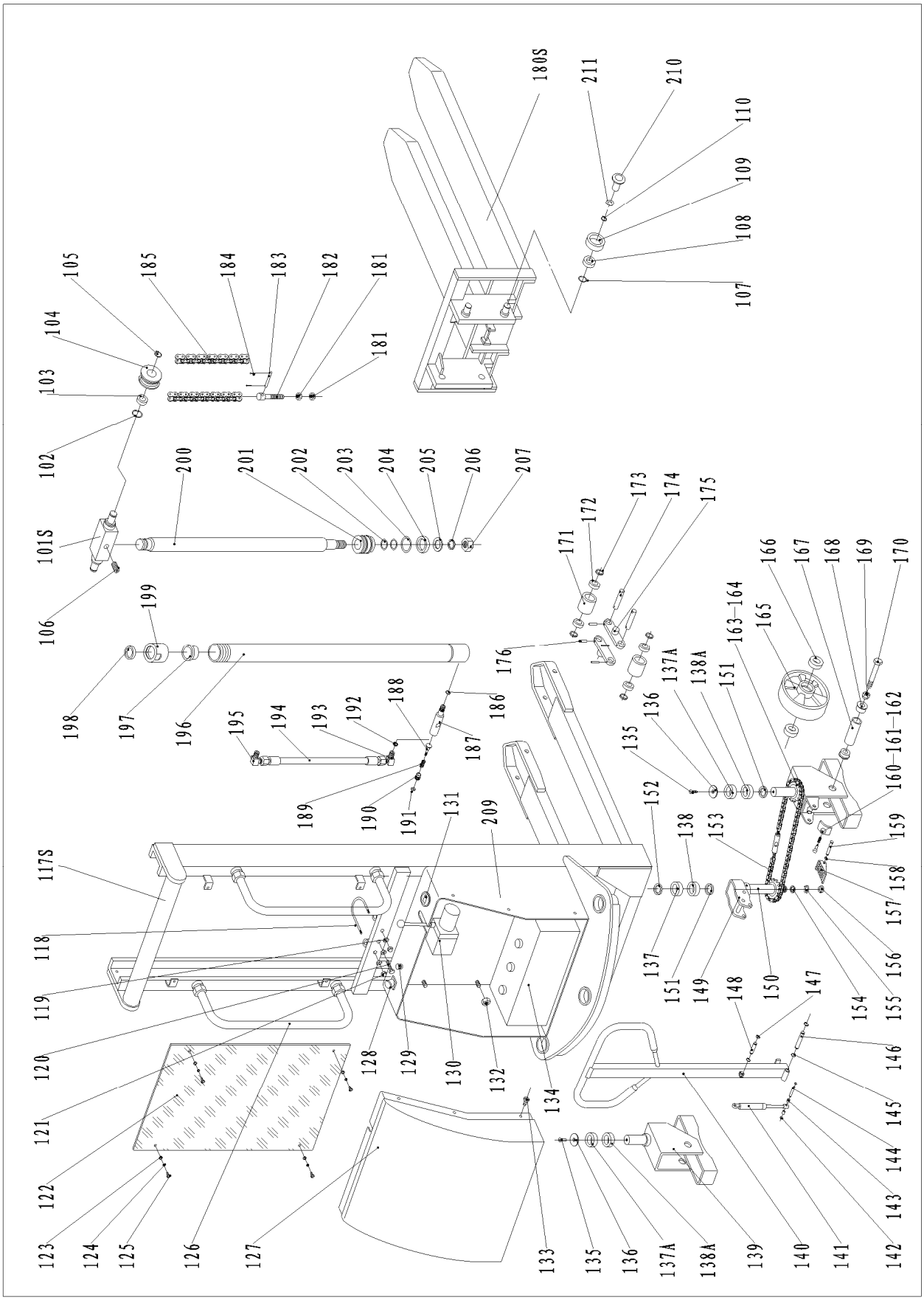
9.6 SPN1025 and SPN1030 part list



SPN1025 and SPN1030 part list

No.	Description	Qty.	No.	Description	Qty.
101	Inner Mast	1	155	Washer	1
102	Locking Ring	2	156	Nut	1
103	Bearing	2	157	Foot Plate	1
104	Roller For Chain	2	158	Locking Ring	1
105	Locking Ring	2	159	Shaft	1
106	Screw	1	160	Brake	1
107	Locking Ring	8	161	Spring	1
108	Bearing	8	162	Bolt	1
109	Roller	4	163	Sprocket Wheel	2
109A	Roller	4	164	Seat of Turning Wheel	1
110	Locking Ring	8	165	Big Wheel	2
111	Bolt	2	166	Bearing	4
112	Bolt	4	167	Shaft of Wheel	2
113	Crutch of Idler Pulley	2	168	Washer	4
114	Shaft	2	169	Locking Nut	2
115	Idler Pulley	2	170	Bolt	2
116	Locking Ring	2	171	Loading Roller	4
117	Mast	1	172	Bearing	8
118	Hoop	1	173	Washer	8
119	Nut	3	174	Shaft	4
120	Bolt	1	175	Linking Plate	4
121	Nut	2	176	Elastic Pin	8
122	Protecting Meshwork	1	177	Fork Carriage	1
123	Protecting Washer	4	178	Locking Ring	2
124	Washer	4	179	Long Axle	1
125	Bolt	4	180Y	Fork	2
126	Handle	2	181	Nut	4
127	Cover	1	182	Bolt	2
128	Charging Plug	1	183	Pin	4
129	Urgent Switch	1	184	Cotter pin	8
130	Pump Station	1	185	Chain	2
131	Voltage Meter	1	186	O-Ring	1
132	Nut	4	187	Body of Adjusting Valve	1
133	Bolt	6	188	Adjusting Bolt	1
134	Battery	1	189	Spring	1
135	Bolt	2	190	Spindle of Valve	1
136	Cap	2	191	Nut	1
137	Bearing	1	192	Seal Washer	1
137A	Bearing	2	193	Elbow Bend	1
138	Bearing	1	194	Vitta	1
138A	Bearing	2	195	Elbow Bend	1
139	Seat of Wheel	1	196	Earthen Pipe	1
140	Draw-Bar for Turning	1	197	Sleeve	1
141	Gas spring	1	198	Dust Ring	1
142	Locking Ring	2	199	Cover	1
143	Washer	2	200	Piston Rod	1
144	Shaft	1	201	Piston	1
145	Locking Ring	2	202	O-Ring	2
146	Shaft	1	203	O-Ring	1
147	Locking Ring	2	204	Seal	1
148	Shaft	1	205	Washer	1
149	Seat of Draw-Bar	1	206	Elastic Washer	1
150	Turning Shaft	1	207	Nut	1
151	Washer	2	208	Connect shank	1
152	Washer	1	209	Fixed Box	1
153	Chain	1	210	Side mat	8
154	Washer	1	211	Washer	8

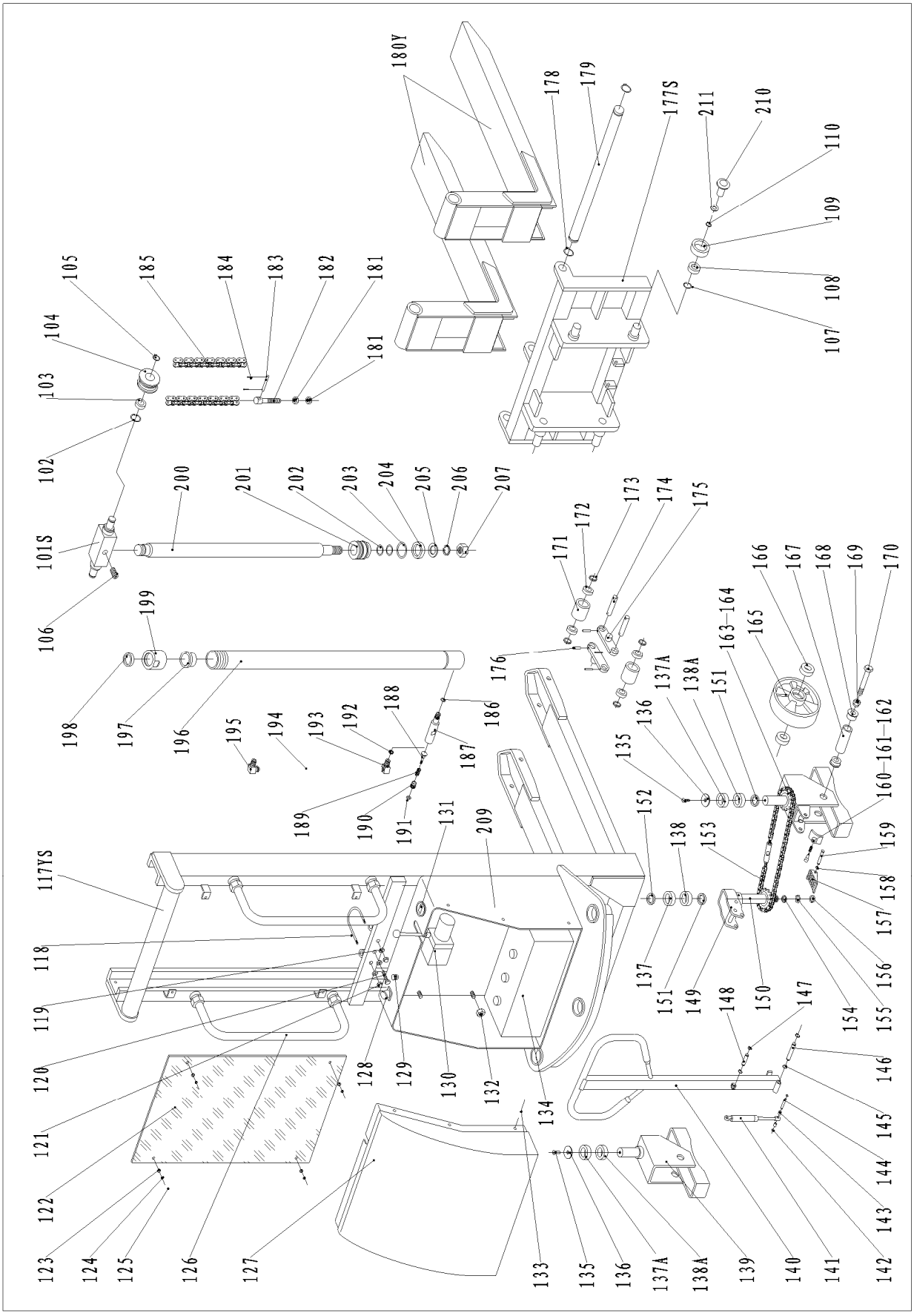
9.7 SPN1016G part list



SPN1016G part list

No.	Description	Qty.	No.	Description	Qty.
101S	Holding plate	1	154	Washer	1
102	Locking Ring	2	155	Washer	1
103	Bearing	2	156	Nut	1
104	Roller For Chain	2	157	Foot Plate	1
105	Locking Ring	2	158	Locking Ring	1
106	Screw	1	159	Shaft	1
107	Locking Ring	4	160	Brake	1
108	Bearing	4	161	Spring	1
109	Roller	4	162	Bolt	1
110	Locking Ring	4	163	Sprocket Wheel	2
111			164	Seat of Turning Wheel	1
112			165	Big Wheel	2
113			166	Bearing	4
114			167	Shaft of Wheel	2
115			168	Washer	4
116			169	Locking Nut	2
117S	Mast	1	170	Bolt	2
118	Hoop	1	171	Loading Roller	4
119	Nut	3	172	Bearing	8
120	Bolt	1	173	Washer	8
121	Nut	2	174	Shaft	4
122	Protecting Meshwork	1	175	Linking Plate	4
123	Protecting Washer	4	176	Elastic Pin	8
124	Washer	4	180S	Fork Carriage	1
125	Bolt	4	181	Nut	4
126	Handle	2	182	Bolt	2
127	Cover	1	183	Pin	4
128	Charging Plug	1	184	Cotter pin	8
129	Urgent Switch	1	185	Chain	2
130	Pump Station	1	186	O-Ring	1
131	Voltage Meter	1	187	Body of Adjusting Valve	1
132	Nut	4	188	Adjusting Bolt	1
133	Bolt	6	189	Spring	1
134	Battery	1	190	Spindle of Valve	1
135	Bolt	2	191	Nut	1
136	Cap	2	192	Seal Washer	1
137	Bearing	1	193	Elbow Bend	1
137A	Bearing	2	194	Vitta	1
138	Bearing	1	195	Elbow Bend	1
138A	Bearing	2	196	Earthen Pipe	1
139	Seat of Wheel	1	197	Sleeve	1
140	Draw-Bar for Turning	1	198	Dust Ring	1
141	Gas spring	1	199	Cover	1
142	Locking Ring	2	200	Piston Rod	1
143	Washer	2	201	Piston	1
144	Shaft	1	202	O-Ring	2
145	Locking Ring	2	203	O-Ring	1
146	Shaft	1	204	Seal	1
147	Locking Ring	2	205	Washer	1
148	Shaft	1	206	Elastic Washer	1
149	Seat of Draw-Bar	1	207	Nut	1
150	Turning Shaft	1	208		
151	Washer	2	209	Fixed Box	1
152	Washer	1	210	Side mat	4
153	Chain	1	211	Washer	4

9.8 SPN1016 part list



SPN1016 part list

No.	Description	Qty.	No.	Description	Qty.
101S	Holding plate	1	156	Nut	1
102	Locking Ring	2	157	Foot Plate	1
103	Bearing	2	158	Locking Ring	1
104	Roller For Chain	2	159	Shaft	1
105	Locking Ring	2	160	Brake	1
106	Screw	1	161	Spring	1
107	Locking Ring	4	162	Bolt	1
108	Bearing	4	163	Sprocket Wheel	2
109	Roller	4	164	Seat of Turning Wheel	1
110	Locking Ring	4	165	Big Wheel	2
111			166	Bearing	4
112			167	Shaft of Wheel	2
113			168	Washer	4
114			169	Locking Nut	2
115			170	Bolt	2
116			171	Loading Roller	4
117YS	Mast	1	172	Bearing	8
118	Hoop	1	173	Washer	8
119	Nut	3	174	Shaft	4
120	Bolt	1	175	Linking Plate	4
121	Nut	2	176	Elastic Pin	8
122	Protecting Meshwork	1	177S	Fork Carriage	1
123	Protecting Washer	4	178	Locking Ring	2
124	Washer	4	179	Long Axle	1
125	Bolt	4	180S	Fork	2
126	Handle	2	181	Nut	4
127	Cover	1	182	Bolt	2
128	Charging Plug	1	183	Pin	4
129	Urgent Switch	1	184	Cotter pin	8
130	Pump Station	1	185	Chain	2
131	Voltage Meter	1	186	O-Ring	1
132	Nut	4	187	Body of Adjusting Valve	1
133	Bolt	6	188	Adjusting Bolt	1
134	Battery	1	189	Spring	1
135	Bolt	2	190	Spindle of Valve	1
136	Cap	2	191	Nut	1
137	Bearing	1	192	Seal Washer	1
137A	Bearing	2	193	Elbow Bend	1
138	Bearing	1	194	Vitta	1
138A	Bearing	2	195	Elbow Bend	1
139	Seat of Wheel	1	196	Earthen Pipe	1
140	Draw-Bar for Turning	1	197	Sleeve	1
141	Gas spring	1	198	Dust Ring	1
142	Locking Ring	2	199	Cover	1
143	Washer	2	200	Piston Rod	1
144	Shaft	1	201	Piston	1
145	Locking Ring	2	202	O-Ring	2
146	Shaft	1	203	O-Ring	1
147	Locking Ring	2	204	Seal	1
148	Shaft	1	205	Washer	1
149	Seat of Draw-Bar	1	206	Elastic Washer	1
150	Turning Shaft	1	207	Nut	1
151	Washer	2	208		
152	Washer	1	209	Fixed Box	1
153	Chain	1	210	Side mat	4
154	Washer	1	211	Washer	4
155	Washer	1			